



Space Center

er Jo

1  
00:00:08,299 --> 00:00:04,539  
good evening and welcome to tonight's

2  
00:00:10,430 --> 00:00:08,309  
sts-133 mission status briefing with us

3  
00:00:12,200 --> 00:00:10,440  
today our International Space Station

4  
00:00:14,660 --> 00:00:12,210  
lead flight director Royce Renfrew for

5  
00:00:16,310 --> 00:00:14,670  
this joint activity onboard the

6  
00:00:19,070 --> 00:00:16,320  
International Space Station and art

7  
00:00:21,230 --> 00:00:19,080  
Thomason the lead EV a officer for the

8  
00:00:22,640 --> 00:00:21,240  
mission I will go first to some opening

9  
00:00:24,200 --> 00:00:22,650  
comments from those two gentlemen and

10  
00:00:27,439 --> 00:00:24,210  
then we'll take your questions right

11  
00:00:29,870 --> 00:00:27,449  
thanks sir so it was an excellent EV a

12  
00:00:32,089 --> 00:00:29,880  
day today crew got out the hatch a

13  
00:00:36,110 --> 00:00:32,099

little bit early this morning got right

14

00:00:38,150 --> 00:00:36,120

into the EBA ops we installed the j 6 12

15

00:00:40,160 --> 00:00:38,160

cable the little power cable that we

16

00:00:43,910 --> 00:00:40,170

needed to get out installed prior to

17

00:00:45,500 --> 00:00:43,920

installation of the pmm tomorrow j 6 12

18

00:00:47,450 --> 00:00:45,510

cable was installed checked out today so

19

00:00:50,750 --> 00:00:47,460

that's all fine that that activity was

20

00:00:53,750 --> 00:00:50,760

done we relocated the the failed pump

21

00:00:56,090 --> 00:00:53,760

module from its position on the payload

22

00:00:59,000 --> 00:00:56,100

oru accommodation or Paula out on the

23

00:01:01,910 --> 00:00:59,010

mobile transporter Steve Bowen riding

24

00:01:05,090 --> 00:01:01,920

the arm with mike barratt flying brought

25

00:01:07,250 --> 00:01:05,100

the pole back and installed it on ESP to

26

00:01:09,649 --> 00:01:07,260

we got all that bolted in and got it set

27

00:01:12,560 --> 00:01:09,659

up so we can vent about 10 pounds of

28

00:01:17,270 --> 00:01:12,570

ammonia out of it tomorrow or on Friday

29

00:01:18,859 --> 00:01:17,280

7e VA to then al Drew went up and took

30

00:01:21,550 --> 00:01:18,869

care of his ops he was going to do up at

31

00:01:24,590 --> 00:01:21,560

the z1 trusts he folded back the to moi

32

00:01:28,819 --> 00:01:24,600

moi flaps we needed to expose those two

33

00:01:30,920 --> 00:01:28,829

are PCMs swapped out an a PFR moved to

34

00:01:33,350 --> 00:01:30,930

tool stanchion to a new a PFR and

35

00:01:35,780 --> 00:01:33,360

brought an old a PFR back to the airlock

36

00:01:37,789 --> 00:01:35,790

and installed that in the airlock we're

37

00:01:40,249 --> 00:01:37,799

going to do some ops on that between EV

38

00:01:43,520 --> 00:01:40,259

a's to take a heat shield off there will

39

00:01:48,170 --> 00:01:43,530

bring that back out on EV a two and both

40

00:01:50,899 --> 00:01:48,180

crew met up at the at the CP three right

41

00:01:52,370 --> 00:01:50,909

next to exposed with just express

42

00:01:55,190 --> 00:01:52,380

logistics carrier number for that we

43

00:01:56,719 --> 00:01:55,200

installed on five day three and put a

44

00:01:58,969 --> 00:01:56,729

wedge at the bottom of that camera

45

00:02:00,920 --> 00:01:58,979

stanchion to lean it away from the four

46

00:02:04,609 --> 00:02:00,930

frames or the five frames are on the

47

00:02:07,069 --> 00:02:04,619

back side a TLC for at that point in the

48

00:02:09,499 --> 00:02:07,079

EBA we were right on the timeline had a

49

00:02:11,780 --> 00:02:09,509

lot of good good margin left and our

50

00:02:12,440 --> 00:02:11,790

consumables so we decided to push ahead

51

00:02:14,809 --> 00:02:12,450

and get the

52

00:02:18,080 --> 00:02:14,819

get ahead task to install the cedar rail

53

00:02:21,110 --> 00:02:18,090

stubs then allow the mt to translate to

54

00:02:24,350 --> 00:02:21,120

the farthest outboard mt location

55

00:02:26,809 --> 00:02:24,360

without having to do a sita card osita

56

00:02:29,089 --> 00:02:26,819

cart swap we got that taken care I've

57

00:02:31,820 --> 00:02:29,099

laid down the the sea to stop way down

58

00:02:33,979 --> 00:02:31,830

the tether rail stop and now we can

59

00:02:36,880 --> 00:02:33,989

translate out there if we need to we

60

00:02:39,920 --> 00:02:36,890

also picked up one other get ahead to

61

00:02:42,710 --> 00:02:39,930

transfer a whiff extender from the mt

62

00:02:44,720 --> 00:02:42,720

over to ESP to that was on our get ahead

63

00:02:47,170 --> 00:02:44,730

and list and steve bowen grabbed that on

64

00:02:49,420 --> 00:02:47,180

the way by and we finished today by

65

00:02:52,280 --> 00:02:49,430

performing the message in a bottle

66

00:02:54,199 --> 00:02:52,290

activity which is capturing the vacuum

67

00:02:56,509 --> 00:02:54,209

of space in a bottle it's a Jackson

68

00:02:58,550 --> 00:02:56,519

payload and we'll bring that back in

69

00:03:01,100 --> 00:02:58,560

it'll be displayed somewhere in a museum

70

00:03:03,470 --> 00:03:01,110

in Japan and all in all those are great

71

00:03:05,960 --> 00:03:03,480

evie a got everything done we needed to

72

00:03:09,530 --> 00:03:05,970

get done and I can't say enough about

73

00:03:12,370 --> 00:03:09,540

the cruise activity stay I inside the

74

00:03:14,870 --> 00:03:12,380

stack we also changed out an RPC M

75

00:03:17,990 --> 00:03:14,880

remote power controller module which is

76  
00:03:19,729 --> 00:03:18,000  
really just a circuit in our electrical

77  
00:03:22,430 --> 00:03:19,739  
power system that had been failed we

78  
00:03:24,770 --> 00:03:22,440  
took advantage of the power inhibits

79  
00:03:27,170 --> 00:03:24,780  
that we needed to have for the j 6 12

80  
00:03:28,910 --> 00:03:27,180  
cable installation those are exactly the

81  
00:03:31,729 --> 00:03:28,920  
same inhibits that we needed to change

82  
00:03:33,860 --> 00:03:31,739  
out the RPC M so Katie Collman took care

83  
00:03:35,509 --> 00:03:33,870  
of that for us today part of that I've

84  
00:03:37,970 --> 00:03:35,519  
got a good integration counter when we

85  
00:03:40,039 --> 00:03:37,980  
repowered node 1 and that all worked

86  
00:03:42,379 --> 00:03:40,049  
fine when I left console they were

87  
00:03:45,770 --> 00:03:42,389  
working our way through the EBA post

88  
00:03:48,370 --> 00:03:45,780

activities and and crews getting ready

89

00:03:50,300 --> 00:03:48,380

to go to bed big day tomorrow for the

90

00:03:53,449 --> 00:03:50,310

permanent multi-purpose module

91

00:03:55,190 --> 00:03:53,459

installation in the morning and then

92

00:03:59,150 --> 00:03:55,200

because we don't have a focused

93

00:04:00,710 --> 00:03:59,160

inspection requirement because the TPS

94

00:04:04,009 --> 00:04:00,720

system on the orbiter has been cleared

95

00:04:06,170 --> 00:04:04,019

for re-entry instead of instead of doing

96

00:04:08,990 --> 00:04:06,180

the activation on flight day 7 with a

97

00:04:10,610 --> 00:04:09,000

focused inspection on flight day 6 after

98

00:04:12,050 --> 00:04:10,620

we get the pmm installed tomorrow

99

00:04:13,940 --> 00:04:12,060

morning we'll step right into the

100

00:04:15,699 --> 00:04:13,950

activation and ingress and hope to be in

101  
00:04:18,560 --> 00:04:15,709  
the module by tomorrow evening and

102  
00:04:20,259 --> 00:04:18,570  
that's that's really all I have and turn

103  
00:04:24,189 --> 00:04:20,269  
over to art see if he had any

104  
00:04:26,770 --> 00:04:24,199  
anything else to add okay like to start

105  
00:04:28,960 --> 00:04:26,780  
off by congratulating Steve owl Nicole

106  
00:04:31,659 --> 00:04:28,970  
and Mike on an outstanding EV eight

107  
00:04:33,249 --> 00:04:31,669  
today this would have been a great EBA

108  
00:04:35,260 --> 00:04:33,259  
by any standard but considering that

109  
00:04:37,119 --> 00:04:35,270  
Steve only had a month to prepare for

110  
00:04:39,339 --> 00:04:37,129  
the CVA it's really a testament to all

111  
00:04:41,409 --> 00:04:39,349  
the hard work the team has put in to get

112  
00:04:43,390 --> 00:04:41,419  
to see VA where it is today I'd also

113  
00:04:44,830 --> 00:04:43,400

like to thank tim kopra for all the hard

114

00:04:47,350 --> 00:04:44,840

work he's put in in developing these

115

00:04:48,610 --> 00:04:47,360

ebas with Alice's hard work these TVA's

116

00:04:49,930 --> 00:04:48,620

wouldn't be where they were today it

117

00:04:53,649 --> 00:04:49,940

wouldn't be the success that we saw

118

00:04:56,620 --> 00:04:53,659

during the VA's today the sts-133 EV a

119

00:04:58,240 --> 00:04:56,630

one was six hours and 34 minutes it was

120

00:04:59,770 --> 00:04:58,250

planned for six hours and 30 minutes so

121

00:05:01,629 --> 00:04:59,780

pretty much right on the timeline there

122

00:05:03,879 --> 00:05:01,639

we completed all the scheduled tasks for

123

00:05:05,350 --> 00:05:03,889

the day Royce already touched on most of

124

00:05:07,749 --> 00:05:05,360

the test I'll give a quick overview

125

00:05:10,390 --> 00:05:07,759

again just to describe those the first

126  
00:05:13,149 --> 00:05:10,400  
one was the j 6 12 extension cable task

127  
00:05:16,360 --> 00:05:13,159  
that is basically an extension cord that

128  
00:05:18,249 --> 00:05:16,370  
allows us to get power from the station

129  
00:05:21,100 --> 00:05:18,259  
once the permanent multi-purpose module

130  
00:05:23,740 --> 00:05:21,110  
is installed and this is for contingency

131  
00:05:25,689 --> 00:05:23,750  
purposes for node 3 in case we needed to

132  
00:05:28,330 --> 00:05:25,699  
give power to note 3 for a contingency

133  
00:05:30,600 --> 00:05:28,340  
case next the event tool and vent tool

134  
00:05:32,980 --> 00:05:30,610  
extender was routed this will be in

135  
00:05:36,159 --> 00:05:32,990  
preparation for venting the ammonia in

136  
00:05:38,379 --> 00:05:36,169  
the pump module four evaa to Steve then

137  
00:05:39,999 --> 00:05:38,389  
was on the robotic arm and stowed the

138  
00:05:43,240 --> 00:05:40,009

failed pump module moved it from the

139

00:05:45,490 --> 00:05:43,250

mobile transporter back over to external

140

00:05:47,620 --> 00:05:45,500

stowage platform number two we had a

141

00:05:49,659 --> 00:05:47,630

small hiccup with the space station

142

00:05:51,879 --> 00:05:49,669

robotic arm workstation it was Anna

143

00:05:54,249 --> 00:05:51,889

kupil at that time the crew did a really

144

00:05:55,990 --> 00:05:54,259

good job of getting moved over to an

145

00:05:57,760 --> 00:05:56,000

alternate workstation with a minimal

146

00:06:00,550 --> 00:05:57,770

time impact to get us right back on

147

00:06:02,409 --> 00:06:00,560

track I'm also when the pump module was

148

00:06:04,209 --> 00:06:02,419

being installed there was four bolts

149

00:06:05,950 --> 00:06:04,219

that were driven after the bolts were

150

00:06:07,450 --> 00:06:05,960

driven to secure it in place there were

151  
00:06:09,459 --> 00:06:07,460  
three electrical connectors that were

152  
00:06:11,200 --> 00:06:09,469  
made it one of the connectors we had a

153  
00:06:13,659 --> 00:06:11,210  
problem with and I have an example of

154  
00:06:16,600 --> 00:06:13,669  
that type of connector here today this

155  
00:06:18,909 --> 00:06:16,610  
is an ins egl connector and this is a

156  
00:06:21,570 --> 00:06:18,919  
smaller version but it's the same design

157  
00:06:24,820 --> 00:06:21,580  
as the one that was used on orbit today

158  
00:06:26,589 --> 00:06:24,830  
they start off by connecting the two

159  
00:06:29,200 --> 00:06:26,599  
pieces of the connector and then

160  
00:06:30,579 --> 00:06:29,210  
throwing this Bale as you can see when

161  
00:06:33,850 --> 00:06:30,589  
you push it all the way down this veil

162  
00:06:35,379 --> 00:06:33,860  
snaps into place on orbit today though

163  
00:06:37,779 --> 00:06:35,389

one of the connectors the connector that

164

00:06:40,209 --> 00:06:37,789

was actually the ground for this

165

00:06:41,890 --> 00:06:40,219

connection they weren't able to get this

166

00:06:44,050 --> 00:06:41,900

bail thrown all the way down and clicked

167

00:06:45,459 --> 00:06:44,060

into place I was pretty close he left it

168

00:06:48,010 --> 00:06:45,469

where it was but it's something we may

169

00:06:49,570 --> 00:06:48,020

address again ani VA to to make sure to

170

00:06:53,950 --> 00:06:49,580

do some more troubleshooting to get this

171

00:06:56,290 --> 00:06:53,960

back in place after the pump module was

172

00:06:58,240 --> 00:06:56,300

secured into place I'll headed out to

173

00:07:00,339 --> 00:06:58,250

the z1 trust where he returned a

174

00:07:02,350 --> 00:07:00,349

portable foot restraint this portable

175

00:07:03,790 --> 00:07:02,360

foot restraint had a heat shield on the

176

00:07:05,499 --> 00:07:03,800

bottom of it that prevents it from being

177

00:07:07,540 --> 00:07:05,509

installed in some of the work sites on

178

00:07:09,279 --> 00:07:07,550

the outside the space station tomorrow

179

00:07:11,429 --> 00:07:09,289

they'll remove that heat shield and then

180

00:07:13,990 --> 00:07:11,439

bring the APF are out on EV a number two

181

00:07:16,179 --> 00:07:14,000

they then headed out to the s1 s3

182

00:07:18,999 --> 00:07:16,189

interface where they installed a camera

183

00:07:21,790 --> 00:07:19,009

wedge this camera wedge cants the entire

184

00:07:24,129 --> 00:07:21,800

camera in board so that there's room for

185

00:07:26,589 --> 00:07:24,139

the robotic arm to access Express

186

00:07:30,640 --> 00:07:26,599

logistics carrier number four and still

187

00:07:32,800 --> 00:07:30,650

replacements there we then went into the

188

00:07:35,800 --> 00:07:32,810

get ahead task of installing the rail

189

00:07:37,450 --> 00:07:35,810

stubs these rail stubs allows the whole

190

00:07:39,700 --> 00:07:37,460

mobile transporter and see the cart

191

00:07:41,430 --> 00:07:39,710

units to translate farther outboard to

192

00:07:44,740 --> 00:07:41,440

give more reach with the robotic arm

193

00:07:47,920 --> 00:07:44,750

during this task the crew did have

194

00:07:50,019 --> 00:07:47,930

difficulty and driving the bolts that

195

00:07:51,579 --> 00:07:50,029

secure these rail stubs in place they

196

00:07:53,379 --> 00:07:51,589

went to a higher torque at that point

197

00:07:54,670 --> 00:07:53,389

and everything worked fine that we just

198

00:07:57,399 --> 00:07:54,680

had a higher running torque on those

199

00:07:59,230 --> 00:07:57,409

bolts and expected from there their

200

00:08:00,999 --> 00:07:59,240

final nominal test they finished up was

201  
00:08:04,209 --> 00:08:01,009  
Jax's message in a bottle where they

202  
00:08:08,110 --> 00:08:04,219  
captured the vacuum of space and that is

203  
00:08:09,999 --> 00:08:08,120  
it for me okay well thank you very much

204  
00:08:11,320 --> 00:08:10,009  
gentleman will now go to questions

205  
00:08:19,300 --> 00:08:11,330  
please remember state your name and

206  
00:08:20,800 --> 00:08:19,310  
affiliation all right thank you mr coral

207  
00:08:23,589 --> 00:08:20,810  
for aviation week i had two little

208  
00:08:25,839 --> 00:08:23,599  
questions could you could you describe

209  
00:08:30,070 --> 00:08:25,849  
at least approximately how long the rail

210  
00:08:32,740 --> 00:08:30,080  
stubs are and and what they sort of by

211  
00:08:34,839 --> 00:08:32,750  
you in terms of access with the robot

212  
00:08:37,060 --> 00:08:34,849  
arm in the future if there's a piece of

213  
00:08:39,219 --> 00:08:37,070

the station on the starboard side that

214

00:08:41,730 --> 00:08:39,229

you can now reach or look at with a

215

00:08:43,589 --> 00:08:41,740

camera or something you couldn't before

216

00:08:45,210 --> 00:08:43,599

and and we can get you the exact

217

00:08:48,600 --> 00:08:45,220

dimension is about a foot long it's not

218

00:08:51,030 --> 00:08:48,610

very long the trick is that we can

219

00:08:53,190 --> 00:08:51,040

actually reach all the way out out

220

00:08:56,850 --> 00:08:53,200

border the Sarge right now than in order

221

00:08:59,340 --> 00:08:56,860

to be able to do that the CETA carts

222

00:09:01,500 --> 00:08:59,350

that we can detach from the mobile

223

00:09:03,920 --> 00:09:01,510

transporter and use to just translate

224

00:09:06,960 --> 00:09:03,930

them via EV a power up and down the rail

225

00:09:08,850 --> 00:09:06,970

the cedar cart on that side of the truss

226

00:09:11,790 --> 00:09:08,860

if we actually translated all the way to

227

00:09:14,040 --> 00:09:11,800

the farthest outboard worksite the cedar

228

00:09:17,820 --> 00:09:14,050

cart itself would stick over the edge of

229

00:09:19,199 --> 00:09:17,830

the cedar rails of the mt rails so every

230

00:09:21,810 --> 00:09:19,209

time we translate all the way out to

231

00:09:24,120 --> 00:09:21,820

that outboard work site now we have to

232

00:09:26,639 --> 00:09:24,130

relocate the cedar carts so they're both

233

00:09:28,769 --> 00:09:26,649

on one side so by adding that little one

234

00:09:30,329 --> 00:09:28,779

foot extension in there we can now

235

00:09:32,910 --> 00:09:30,339

translate all the way out board without

236

00:09:37,860 --> 00:09:32,920

having to spend the EV a time to

237

00:09:40,199 --> 00:09:37,870

relocate those cita curves and I had a

238

00:09:43,769 --> 00:09:40,209

just a second question about the control

239

00:09:46,560 --> 00:09:43,779

station in the cupola I know you I know

240

00:09:48,600 --> 00:09:46,570

you were able to adjust but when you do

241

00:09:51,269 --> 00:09:48,610

the second spacewalk will you be back in

242

00:09:54,150 --> 00:09:51,279

the cupola or is that kind of do to be

243

00:09:58,350 --> 00:09:54,160

determined yet no we we finish that off

244

00:10:03,329 --> 00:09:58,360

today the pump module has actually been

245

00:10:05,280 --> 00:10:03,339

stowed out on there's a spare latching

246

00:10:07,470 --> 00:10:05,290

end effector for the big arm that is

247

00:10:09,630 --> 00:10:07,480

actually called the pego to oru

248

00:10:11,190 --> 00:10:09,640

accommodation it's a piece of robotics

249

00:10:13,350 --> 00:10:11,200

equipment out on them on the mobile

250

00:10:16,019 --> 00:10:13,360

transporter it's literally a spare end

251  
00:10:17,730 --> 00:10:16,029  
effector and we use it as a sewage space

252  
00:10:19,769 --> 00:10:17,740  
whenever we need to put a big payload in

253  
00:10:22,139 --> 00:10:19,779  
here when we had the pump module fell in

254  
00:10:24,780 --> 00:10:22,149  
August when we took the failed pump

255  
00:10:26,579 --> 00:10:24,790  
module out we stowed it in the power so

256  
00:10:28,680 --> 00:10:26,589  
it's been in there ever since August and

257  
00:10:31,290 --> 00:10:28,690  
in between that time and today we've

258  
00:10:33,840 --> 00:10:31,300  
actually had a software upgrade for the

259  
00:10:35,850 --> 00:10:33,850  
robotic system on the vehicle and when

260  
00:10:39,449 --> 00:10:35,860  
we did that software upgrade we loaded

261  
00:10:42,030 --> 00:10:39,459  
some default parameters to the PO ah and

262  
00:10:44,310 --> 00:10:42,040  
when we got back to it today the system

263  
00:10:46,500 --> 00:10:44,320

got itself confused because it realized

264

00:10:48,810 --> 00:10:46,510

it was holding a payload but it had

265

00:10:50,160 --> 00:10:48,820

default parameters voted in its software

266

00:10:52,829 --> 00:10:50,170

that said it was unloaded

267

00:10:55,139 --> 00:10:52,839

so it had a conflict in its own logic

268

00:10:57,269 --> 00:10:55,149

there that said I can't be both locked

269

00:10:59,550 --> 00:10:57,279

and loaded and unloaded simultaneously

270

00:11:01,410 --> 00:10:59,560

and the and the workstation did exactly

271

00:11:04,019 --> 00:11:01,420

what it was supposed to do and took

272

00:11:05,910 --> 00:11:04,029

itself down and save the system we

273

00:11:07,710 --> 00:11:05,920

transitioned the crew down to the lab to

274

00:11:10,410 --> 00:11:07,720

finish the activity and then by the time

275

00:11:11,759 --> 00:11:10,420

I got to the end of my shift we had

276  
00:11:14,519 --> 00:11:11,769  
actually figured out what had gone wrong

277  
00:11:17,189 --> 00:11:14,529  
with that workstation powered it back up

278  
00:11:19,050 --> 00:11:17,199  
to a backup configuration actually

279  
00:11:20,939 --> 00:11:19,060  
during the EBA we powered it back up to

280  
00:11:22,259 --> 00:11:20,949  
the backup configuration just in case we

281  
00:11:24,840 --> 00:11:22,269  
needed it to go back to another

282  
00:11:26,819 --> 00:11:24,850  
workstation but we understand everything

283  
00:11:28,879 --> 00:11:26,829  
is wrong with that now we've got it all

284  
00:11:31,319 --> 00:11:28,889  
sorted out and we'll use the cupola

285  
00:11:33,660 --> 00:11:31,329  
workstation to install the pmm tomorrow

286  
00:11:44,170 --> 00:11:33,670  
and we'll use it for EV a two on five

287  
00:11:50,050 --> 00:11:46,860  
hi Robert Pearlman with collectspace.com

288  
00:11:52,540 --> 00:11:50,060

with regards to the mission extension by

289

00:11:56,950 --> 00:11:52,550

one day that was called up at the end of

290

00:11:59,470 --> 00:11:56,960

the day what do you gain pmm wise with

291

00:12:02,350 --> 00:11:59,480

that extra day and if the Soyuz fly

292

00:12:05,710 --> 00:12:02,360

about is approved do you lose what that

293

00:12:08,320 --> 00:12:05,720

that extra work or does that go on

294

00:12:11,680 --> 00:12:08,330

regardless okay so for the first

295

00:12:14,829 --> 00:12:11,690

question obviously we've got the HTV

296

00:12:16,930 --> 00:12:14,839

currently on the vehicle so we're out of

297

00:12:19,000 --> 00:12:16,940

sequence there because 133 was supposed

298

00:12:20,440 --> 00:12:19,010

to fly first and the PM what RPM em

299

00:12:24,340 --> 00:12:20,450

would already be installed when HTV

300

00:12:26,380 --> 00:12:24,350

arrived HTV we extended HTV duration on

301  
00:12:29,290 --> 00:12:26,390  
orbit to make sure it was still there

302  
00:12:31,930 --> 00:12:29,300  
when 133 arrived but it's it's scheduled

303  
00:12:34,990 --> 00:12:31,940  
to be undocked in deorbit adapter

304  
00:12:37,930 --> 00:12:35,000  
shortly after 133 leave so what we gain

305  
00:12:41,170 --> 00:12:37,940  
with the additional day is an additional

306  
00:12:43,269 --> 00:12:41,180  
day with with really nine US crew

307  
00:12:46,630 --> 00:12:43,279  
members or 12 crew members total on the

308  
00:12:48,040 --> 00:12:46,640  
vehicle to help unload the pmm and get

309  
00:12:52,300 --> 00:12:48,050  
all of whatever we were going to bring

310  
00:12:54,070 --> 00:12:52,310  
home in HTV revo relocated from pmm over

311  
00:12:58,600 --> 00:12:54,080  
the HTV so the plus one day actually

312  
00:13:00,310 --> 00:12:58,610  
buys us a full crew day of six crew

313  
00:13:03,400 --> 00:13:00,320

members that we would not normally have

314

00:13:04,660 --> 00:13:03,410

on board the vehicle to do that transfer

315

00:13:07,120 --> 00:13:04,670

activity so we're going to get a lot of

316

00:13:08,800 --> 00:13:07,130

transfer transfer done that we wouldn't

317

00:13:11,350 --> 00:13:08,810

normally be able to get done if we

318

00:13:13,840 --> 00:13:11,360

didn't add the plus one day if we if we

319

00:13:16,720 --> 00:13:13,850

turn around then and do the the soyuz

320

00:13:18,660 --> 00:13:16,730

five out activity we really don't lose

321

00:13:21,579 --> 00:13:18,670

that additional transfer activity

322

00:13:23,320 --> 00:13:21,589

because the only the only crew members

323

00:13:25,480 --> 00:13:23,330

who won't be on board or what wouldn't

324

00:13:28,540 --> 00:13:25,490

be involved in the end the transfer ops

325

00:13:31,870 --> 00:13:28,550

would be the the three 24s crew members

326

00:13:34,360 --> 00:13:31,880

so Alex and Oleg and Scott what the guys

327

00:13:36,400 --> 00:13:34,370

are actually flying around in 24 s would

328

00:13:37,990 --> 00:13:36,410

not be involved in in the transfer

329

00:13:42,850 --> 00:13:38,000

activities and we'd still be able to get

330

00:13:44,170 --> 00:13:42,860

a lot of that a lot of that done and on

331

00:13:47,050 --> 00:13:44,180

the subject of transfers do you have an

332

00:13:50,019 --> 00:13:47,060

idea of how how far they are right now

333

00:13:51,840 --> 00:13:50,029

in terms of moving payload between

334

00:13:53,610 --> 00:13:51,850

discovery and the station is

335

00:13:57,569 --> 00:13:53,620

percentage or something you could

336

00:13:59,100 --> 00:13:57,579

prevent I did not track that today I

337

00:14:02,550 --> 00:13:59,110

should check that before I came over

338

00:14:04,800 --> 00:14:02,560

here I know that my a CEO transferor

339

00:14:07,590 --> 00:14:04,810

guys are very happy about where we're at

340

00:14:09,090 --> 00:14:07,600

we were either right on the time on her

341

00:14:10,860 --> 00:14:09,100

head of the time I night the number i

342

00:14:12,569 --> 00:14:10,870

remember from yesterday is we were forty

343

00:14:15,269 --> 00:14:12,579

percent done so we're something better

344

00:14:22,439 --> 00:14:15,279

than forty percent today so we're doing

345

00:14:24,090 --> 00:14:22,449

very well there Gina Gina and Sarah ABC

346

00:14:25,559 --> 00:14:24,100

News you both talked about the message

347

00:14:28,920 --> 00:14:25,569

in the bottle but if you had to write a

348

00:14:31,439 --> 00:14:28,930

message what would you both right you

349

00:14:34,710 --> 00:14:31,449

know I think the this this little

350

00:14:37,680 --> 00:14:34,720

activity that is a great thing it the

351

00:14:39,990 --> 00:14:37,690

everybody gets a chance to go to this

352

00:14:41,340 --> 00:14:40,000

museum and i'm not sure what museum it's

353

00:14:42,600 --> 00:14:41,350

going to wind up in somewhere in japan

354

00:14:44,850 --> 00:14:42,610

you'll be able to go in there and as I

355

00:14:46,980 --> 00:14:44,860

understand the concept behind it here

356

00:14:48,809 --> 00:14:46,990

you go stand in front of this bottle and

357

00:14:51,269 --> 00:14:48,819

just imagine for a while what you would

358

00:14:53,879 --> 00:14:51,279

fill that with and and for me personally

359

00:14:56,550 --> 00:14:53,889

what what that represents is something

360

00:14:58,439 --> 00:14:56,560

tangible that the average person in

361

00:15:01,379 --> 00:14:58,449

Japan or anybody that wants to go see

362

00:15:04,889 --> 00:15:01,389

this museum go see this article in a

363

00:15:07,410 --> 00:15:04,899

museum can relate to what I do for a

364

00:15:09,360 --> 00:15:07,420

living and and and anything that that

365

00:15:13,050 --> 00:15:09,370

gets that message out there for the

366

00:15:15,439 --> 00:15:13,060

average citizen is as a great thing from

367

00:15:17,519 --> 00:15:15,449

my perspective and and I think it

368

00:15:18,449 --> 00:15:17,529

whether or not folks think about what

369

00:15:20,759 --> 00:15:18,459

they're going to put in there I think

370

00:15:24,660 --> 00:15:20,769

they'll all think about that this was

371

00:15:27,449 --> 00:15:24,670

captured on sts-133 uofi discoveries

372

00:15:29,429 --> 00:15:27,459

last mission and and is as a connection

373

00:15:32,610 --> 00:15:29,439

back to this fight first long is that

374

00:15:34,920 --> 00:15:32,620

message model exists in Japan and art

375

00:15:36,749 --> 00:15:34,930

what would you put in there well I agree

376

00:15:38,610 --> 00:15:36,759

with Royce that this is a great thing

377

00:15:40,470 --> 00:15:38,620

and the crew took a lot of pictures

378

00:15:42,749 --> 00:15:40,480

today so in the museum it'll be very

379

00:15:44,819 --> 00:15:42,759

nice to see a picture of someone holding

380

00:15:45,929 --> 00:15:44,829

this thing in space and then also see it

381

00:15:48,269 --> 00:15:45,939

right there in front of you to know that

382

00:15:50,400 --> 00:15:48,279

this was actually outside in the vacuum

383

00:15:53,179 --> 00:15:50,410

of space and held by EBA crew members

384

00:15:54,929 --> 00:15:53,189

and still contains that vacuum today so

385

00:15:56,770 --> 00:15:54,939

they're going to be a great thing to see

386

00:15:58,510 --> 00:15:56,780

in a museum

387

00:16:00,640 --> 00:15:58,520

the Wonder you answer my question what

388

00:16:06,160 --> 00:16:00,650

would you write what would your message

389

00:16:08,140 --> 00:16:06,170

be you know I don't know I'd have to

390

00:16:11,050 --> 00:16:08,150

think about it before I before I throw

391

00:16:15,220 --> 00:16:11,060

something in there all right now I

392

00:16:19,630 --> 00:16:15,230

didn't answer your questions germana I

393

00:16:20,620 --> 00:16:19,640

think Jill's coming back here bill

394

00:16:23,320 --> 00:16:20,630

Hartwick cigarettes with two quick

395

00:16:25,020 --> 00:16:23,330

questions for Royce on the Soyuz flava

396

00:16:27,460 --> 00:16:25,030

I'm just curious as an operations guy

397

00:16:29,290 --> 00:16:27,470

who looks at this how do you look at the

398

00:16:31,540 --> 00:16:29,300

risk versus the benefit I mean it really

399

00:16:33,940 --> 00:16:31,550

comes down to pictures versus put some

400

00:16:35,590 --> 00:16:33,950

guys in a capsule and undocking which in

401  
00:16:37,740 --> 00:16:35,600  
the past they've had problems etc I mean

402  
00:16:41,740 --> 00:16:37,750  
how do you view that risk benefit trade

403  
00:16:42,940 --> 00:16:41,750  
well you know you couch it as an ops and

404  
00:16:45,730 --> 00:16:42,950  
how do I look at it from an ops

405  
00:16:48,280 --> 00:16:45,740  
perspective when when we when we fly the

406  
00:16:50,740 --> 00:16:48,290  
stack in in everyday ops with you

407  
00:16:53,830 --> 00:16:50,750  
visiting vehicle activities we docked

408  
00:16:55,540 --> 00:16:53,840  
the ATV the other day we docked the HTV

409  
00:16:56,920 --> 00:16:55,550  
the other day I've been on console for a

410  
00:17:00,340 --> 00:16:56,930  
number of soldiers and progress

411  
00:17:02,650 --> 00:17:00,350  
rendevouz and undock activities so from

412  
00:17:05,470 --> 00:17:02,660  
from a purely no kiddin look at it from

413  
00:17:06,970 --> 00:17:05,480

an ops perspective what we're what we're

414

00:17:10,090 --> 00:17:06,980

planning to do for the Soyuz fly about

415

00:17:12,190 --> 00:17:10,100

and undocking a Soyuz and taking it out

416

00:17:15,010 --> 00:17:12,200

and then reading a Soyuz and bring it

417

00:17:16,870 --> 00:17:15,020

back in is not beyond the technical

418

00:17:18,820 --> 00:17:16,880

capabilities of what we're what we've

419

00:17:21,400 --> 00:17:18,830

done with the ISS in the past and in

420

00:17:23,410 --> 00:17:21,410

fact it's very similar to the sum of the

421

00:17:24,940 --> 00:17:23,420

Soyuz relocate activities that we've

422

00:17:27,580 --> 00:17:24,950

done in the past where we needed to move

423

00:17:29,770 --> 00:17:27,590

the Soyuz from one docking point to

424

00:17:32,020 --> 00:17:29,780

another in order to free up a docking

425

00:17:34,360 --> 00:17:32,030

port for another vehicle coming in so

426  
00:17:38,260 --> 00:17:34,370  
from a purely no kiddin technical

427  
00:17:39,850 --> 00:17:38,270  
perspective if this is not incredibly

428  
00:17:42,250 --> 00:17:39,860  
off nominal from what we've done before

429  
00:17:44,170 --> 00:17:42,260  
going to put the put the stack and a

430  
00:17:46,420 --> 00:17:44,180  
configuration and allow the crew to take

431  
00:17:50,830 --> 00:17:46,430  
some pictures and and from that

432  
00:17:52,840 --> 00:17:50,840  
perspective the wrist trade trade

433  
00:17:54,940 --> 00:17:52,850  
perspective the you know that's the

434  
00:17:56,980 --> 00:17:54,950  
other thing that that we that we wind up

435  
00:17:59,140 --> 00:17:56,990  
looking at all the time is that there's

436  
00:18:01,450 --> 00:17:59,150  
the technical capability to go do an

437  
00:18:02,300 --> 00:18:01,460  
activity vice what is the risk of being

438  
00:18:04,940 --> 00:18:02,310

able to do an act

439

00:18:07,460 --> 00:18:04,950

and I think today's evaa is a very good

440

00:18:09,050 --> 00:18:07,470

example of you know we put two crew

441

00:18:11,810 --> 00:18:09,060

members outside the vehicle that's a

442

00:18:13,430 --> 00:18:11,820

that's a risky thing we understand the

443

00:18:16,370 --> 00:18:13,440

risks that are associated with putting

444

00:18:17,900 --> 00:18:16,380

crew members outside to do ops and and

445

00:18:20,150 --> 00:18:17,910

we all get comfortable with putting them

446

00:18:22,700 --> 00:18:20,160

putting them in that configuration so

447

00:18:24,410 --> 00:18:22,710

then you have to couch that as we're

448

00:18:26,480 --> 00:18:24,420

going to go take three crew members and

449

00:18:28,250 --> 00:18:26,490

undock them from the station and take

450

00:18:30,350 --> 00:18:28,260

them out a couple hundred metres to let

451  
00:18:33,560 --> 00:18:30,360  
them take some pictures what is the risk

452  
00:18:35,510 --> 00:18:33,570  
that you that you bring in there and and

453  
00:18:37,640 --> 00:18:35,520  
from my perspective the risks associated

454  
00:18:39,650 --> 00:18:37,650  
with taking the crew out to take those

455  
00:18:41,720 --> 00:18:39,660  
pictures is not that different from what

456  
00:18:44,450 --> 00:18:41,730  
we normally do from our from our Russian

457  
00:18:46,760 --> 00:18:44,460  
visiting vehicle activities so we're

458  
00:18:48,440 --> 00:18:46,770  
going to and we're going to be ready to

459  
00:18:50,540 --> 00:18:48,450  
go whatever the program decides they

460  
00:18:53,030 --> 00:18:50,550  
want us to do we'll be ready to go

461  
00:18:55,940 --> 00:18:53,040  
execute it come up after they make a

462  
00:18:57,350 --> 00:18:55,950  
decision tomorrow well just the other

463  
00:18:59,090 --> 00:18:57,360

side of that question that was the

464

00:19:00,710 --> 00:18:59,100

benefit part of the risk-benefit trade

465

00:19:02,270 --> 00:19:00,720

which is when you do a spacewalk you're

466

00:19:04,400 --> 00:19:02,280

doing it because the station obviously

467

00:19:06,470 --> 00:19:04,410

needs to work done so the risk is worth

468

00:19:08,810 --> 00:19:06,480

it sure is the risk of flying the soil

469

00:19:10,970 --> 00:19:08,820

you is worth hitting what amounts to a

470

00:19:13,520 --> 00:19:10,980

an incredibly pretty picture but still

471

00:19:15,140 --> 00:19:13,530

just a picture right so if you look at

472

00:19:16,730 --> 00:19:15,150

the benefit side of that equation what

473

00:19:19,280 --> 00:19:16,740

do we get out of being able to do this

474

00:19:21,350 --> 00:19:19,290

and I think if I can't remember we had a

475

00:19:22,820 --> 00:19:21,360

press conference while back I got asked

476  
00:19:26,330 --> 00:19:22,830  
the question about what we were going to

477  
00:19:28,220 --> 00:19:26,340  
do after the after the the shuttle stop

478  
00:19:30,230 --> 00:19:28,230  
flying for being able to capture the

479  
00:19:31,790 --> 00:19:30,240  
data for the fly around activities that

480  
00:19:35,090 --> 00:19:31,800  
we've done for your number of years with

481  
00:19:36,740 --> 00:19:35,100  
the orbiter the ability to take the

482  
00:19:38,870 --> 00:19:36,750  
Soyuz out and essentially doing fly

483  
00:19:40,310 --> 00:19:38,880  
around of the vehicle is something that

484  
00:19:41,960 --> 00:19:40,320  
I assume we're going to wind up doing

485  
00:19:43,940 --> 00:19:41,970  
after the shuttle stops fighting to be

486  
00:19:46,400 --> 00:19:43,950  
able to continue to capture that data on

487  
00:19:48,740 --> 00:19:46,410  
mmod strikes and how is the vehicle

488  
00:19:50,690 --> 00:19:48,750

actually behaving and long duration in

489

00:19:52,850 --> 00:19:50,700

space so part of the benefits that will

490

00:19:57,170 --> 00:19:52,860

get theirs will have the ability to take

491

00:19:58,790 --> 00:19:57,180

a to take a an opportunity during this

492

00:20:00,080 --> 00:19:58,800

mission to practice what we're probably

493

00:20:02,660 --> 00:20:00,090

going to wind up doing here eventually

494

00:20:04,130 --> 00:20:02,670

anyway yes we'll get a really nice

495

00:20:06,560 --> 00:20:04,140

picture out of it but there are some

496

00:20:08,840 --> 00:20:06,570

operational advantages as well be able

497

00:20:10,460 --> 00:20:08,850

to take some pictures of the side of the

498

00:20:12,230 --> 00:20:10,470

ISS that we don't normally see in the

499

00:20:13,890 --> 00:20:12,240

fire rounds be able to take an

500

00:20:15,360 --> 00:20:13,900

opportunity to see how we would

501  
00:20:17,670 --> 00:20:15,370  
actually do a complete lap of the

502  
00:20:19,410 --> 00:20:17,680  
vehicle someday in the future where were

503  
00:20:22,290 --> 00:20:19,420  
the Soyuz with the with a career in

504  
00:20:24,240 --> 00:20:22,300  
there taking pictures okay we have a

505  
00:20:26,400 --> 00:20:24,250  
number of reporters on the phone bridge

506  
00:20:27,420 --> 00:20:26,410  
and I'm going to go take their questions

507  
00:20:29,460 --> 00:20:27,430  
right now and then we'll come back for

508  
00:20:32,970 --> 00:20:29,470  
some wrap-ups here in the room I think

509  
00:20:35,850 --> 00:20:32,980  
first on the line is Irene Klotz thinks

510  
00:20:39,750 --> 00:20:35,860  
I don't have any question okay Marcia

511  
00:20:41,880 --> 00:20:39,760  
Dunn yes I was just wondering two

512  
00:20:45,300 --> 00:20:41,890  
questions have the Russians signed off

513  
00:20:48,330 --> 00:20:45,310

on the fly around cheddar is mission

514

00:20:50,940 --> 00:20:48,340

management teams still awaiting that as

515

00:20:52,710 --> 00:20:50,950

far as i understand it we're still in

516

00:20:54,990 --> 00:20:52,720

the posture that we came in the mission

517

00:20:58,200 --> 00:20:55,000

within that the combined mission

518

00:21:03,060 --> 00:20:58,210

management team I the mmt I mmt decision

519

00:21:05,010 --> 00:21:03,070

will be made tomorrow on Friday 6 fly

520

00:21:08,450 --> 00:21:05,020

rod is conducted with the hatches

521

00:21:11,700 --> 00:21:08,460

between the shadow and the station be

522

00:21:15,540 --> 00:21:11,710

closed and what all the crews go to

523

00:21:20,640 --> 00:21:15,550

their various vessels negative it would

524

00:21:23,040 --> 00:21:20,650

be we there's a hatch between mr m 2 and

525

00:21:24,600 --> 00:21:23,050

the russian segment that would be closed

526  
00:21:27,390 --> 00:21:24,610  
and that would be the only hatch that

527  
00:21:29,310 --> 00:21:27,400  
would be closed the rest of the ISS

528  
00:21:31,860 --> 00:21:29,320  
would be open for business and i fully

529  
00:21:35,820 --> 00:21:31,870  
expect to be doing transfer ops and

530  
00:21:37,950 --> 00:21:35,830  
other I VA ops with the crew members

531  
00:21:40,850 --> 00:21:37,960  
that remain on the vehicle when we do

532  
00:21:45,270 --> 00:21:40,860  
the 50 thank you that's all for me

533  
00:21:47,460 --> 00:21:45,280  
Charles Atkinson th off market

534  
00:21:50,580 --> 00:21:47,470  
indicators that song is normally BYE MOM

535  
00:21:52,950 --> 00:21:50,590  
white following up on Martha what a rush

536  
00:21:54,870 --> 00:21:52,960  
is not from a fly around and it's not

537  
00:21:57,450 --> 00:21:54,880  
the working hard to get Russia to agree

538  
00:21:59,820 --> 00:21:57,460

for the social photo op when is it

539

00:22:02,940 --> 00:21:59,830

similar to want to get on the export 71

540

00:22:05,520 --> 00:22:02,950

I fly around and you win the award for

541

00:22:07,110 --> 00:22:05,530

the worst comlink I don't think I copied

542

00:22:09,210 --> 00:22:07,120

the first part of the question but I'll

543

00:22:12,210 --> 00:22:09,220

try to answer if I don't get it all you

544

00:22:14,520 --> 00:22:12,220

can come back as far as I know we're

545

00:22:16,530 --> 00:22:14,530

still we're still talking as a

546

00:22:20,010 --> 00:22:16,540

management team with all of our

547

00:22:21,660 --> 00:22:20,020

international partners with with Jackson

548

00:22:23,970 --> 00:22:21,670

with ISA and with

549

00:22:26,700 --> 00:22:23,980

and all of the players here including

550

00:22:28,950 --> 00:22:26,710

the shuttle program and and that

551

00:22:31,290 --> 00:22:28,960

decision will be made in the mmt

552

00:22:36,350 --> 00:22:31,300

tomorrow and I hope that answered the

553

00:22:39,300 --> 00:22:36,360

question oh boy sure a little bit better

554

00:22:41,460 --> 00:22:39,310

okay thank you talking with bhusan still

555

00:22:43,590 --> 00:22:41,470

going on about hologram come on exploit

556

00:22:46,020 --> 00:22:43,600

our display is one of us two thoughts on

557

00:22:48,390 --> 00:22:46,030

the flyer wrong you heard early word as

558

00:22:52,890 --> 00:22:48,400

far as Russell and more of a think that

559

00:22:55,080 --> 00:22:52,900

he'll go one more I think what I'm

560

00:22:57,060 --> 00:22:55,090

hearing is the question is what are the

561

00:22:59,940 --> 00:22:57,070

Russians thoughts about to fly around I

562

00:23:03,270 --> 00:22:59,950

I don't have I don't have a status on

563

00:23:05,510 --> 00:23:03,280

that I really don't the all the

564

00:23:08,190 --> 00:23:05,520

international partners will be

565

00:23:12,270 --> 00:23:08,200

represented in the IMM tea tomorrow on

566

00:23:14,280 --> 00:23:12,280

Friday 6 and and we'll get what what all

567

00:23:17,580 --> 00:23:14,290

of the international partners assessment

568

00:23:19,800 --> 00:23:17,590

of the firearm will be at that time and

569

00:23:22,350 --> 00:23:19,810

lastly it's going to be fun along to the

570

00:23:27,480 --> 00:23:22,360

SPF 70 my weird while around what we saw

571

00:23:33,240 --> 00:23:27,490

with it for you the SES 71 mere fire

572

00:23:34,590 --> 00:23:33,250

around is similar as I when we went back

573

00:23:36,240 --> 00:23:34,600

and looked at some of that when we first

574

00:23:40,080 --> 00:23:36,250

started talking about this activity in

575

00:23:43,440 --> 00:23:40,090

that case we took us so use out and then

576  
00:23:46,320 --> 00:23:43,450  
undocked the orbiter from mirror and

577  
00:23:48,420 --> 00:23:46,330  
then read acht the Soyuz that would not

578  
00:23:50,160 --> 00:23:48,430  
be the sequence that we would that we

579  
00:23:53,520 --> 00:23:50,170  
would execute in this case in this case

580  
00:23:55,740 --> 00:23:53,530  
we would undock the Soyuz take it out

581  
00:23:58,380 --> 00:23:55,750  
take the pictures and then bring the

582  
00:24:00,390 --> 00:23:58,390  
Soyuz back in and then we would undock

583  
00:24:02,520 --> 00:24:00,400  
the orbiter the next day so it's

584  
00:24:05,400 --> 00:24:02,530  
somewhat similar but the sequencing is a

585  
00:24:07,560 --> 00:24:05,410  
little bit different okay one more

586  
00:24:11,730 --> 00:24:07,570  
question you said you hard work phones

587  
00:24:15,770 --> 00:24:11,740  
activated through the iso slipper all we

588  
00:24:19,740 --> 00:24:18,300

I'm sorry would you repeat the question

589

00:24:23,070 --> 00:24:19,750

please we're having a little hard time

590

00:24:25,500 --> 00:24:23,080

hearing in look like the exact will

591

00:24:28,770 --> 00:24:25,510

radiate the crew with fine words

592

00:24:30,630 --> 00:24:28,780

following the message in a bottle did

593

00:24:32,370 --> 00:24:30,640

Jax I already talked to the crew with

594

00:24:34,380 --> 00:24:32,380

the message in about I

595

00:24:38,010 --> 00:24:34,390

is when I left council I had not heard

596

00:24:39,840 --> 00:24:38,020

that come up from Jackson no but I know

597

00:24:41,340 --> 00:24:39,850

they were they were very excited to

598

00:24:44,910 --> 00:24:41,350

actually have gotten it done I've been

599

00:24:46,530 --> 00:24:44,920

working with my jaksa counterparts

600

00:24:49,200 --> 00:24:46,540

leading up to the mission they were very

601  
00:24:51,540 --> 00:24:49,210  
excited to have it on the on the EPA's

602  
00:24:55,020 --> 00:24:51,550  
and we actually had a timeline as the

603  
00:24:56,880 --> 00:24:55,030  
last activity today but arted included

604  
00:24:58,500 --> 00:24:56,890  
in a VA to if we couldn't get to it

605  
00:25:01,470 --> 00:24:58,510  
today we were going to be sure we got it

606  
00:25:03,690 --> 00:25:01,480  
on 133 so they were very happy that that

607  
00:25:05,880 --> 00:25:03,700  
we did the activity i talked to jay

608  
00:25:07,650 --> 00:25:05,890  
flight when they were out there at the

609  
00:25:09,240 --> 00:25:07,660  
end of the uva with the crew capture in

610  
00:25:11,520 --> 00:25:09,250  
the vacuum and he was very excited on

611  
00:25:16,260 --> 00:25:11,530  
the loop stood to see that payload get

612  
00:25:17,700 --> 00:25:16,270  
taken care of thank you okay I think we

613  
00:25:22,710 --> 00:25:17,710

have one last report on the phone bridge

614

00:25:25,020 --> 00:25:22,720

todd halverson calverson oak florida

615

00:25:26,790 --> 00:25:25,030

today can hear me absolutely that's a

616

00:25:30,600 --> 00:25:26,800

good comment um link there we'll take

617

00:25:32,640 --> 00:25:30,610

that one all right great I wonder if

618

00:25:36,330 --> 00:25:32,650

y'all can comment a little bit more

619

00:25:39,990 --> 00:25:36,340

about the robotic workstation crash in

620

00:25:42,870 --> 00:25:40,000

cupola that seemed to be a real scramble

621

00:25:47,010 --> 00:25:42,880

going on with a space Walker holding an

622

00:25:50,160 --> 00:25:47,020

800 pound box the size of a large chest

623

00:25:51,900 --> 00:25:50,170

of drawers on the end of a robot arm and

624

00:25:56,070 --> 00:25:51,910

I'm wondering what was going through

625

00:25:59,790 --> 00:25:56,080

your mind and and give us a sense of how

626

00:26:04,350 --> 00:25:59,800

challenging it was to recover our mops

627

00:26:06,510 --> 00:26:04,360

and continue the space law sure and and

628

00:26:08,340 --> 00:26:06,520

that's actually a good case for me to

629

00:26:11,280 --> 00:26:08,350

have on console because I used to set at

630

00:26:13,950 --> 00:26:11,290

the Robo council so my robotics officer

631

00:26:16,140 --> 00:26:13,960

and I were pretty much in sync there in

632

00:26:17,490 --> 00:26:16,150

reality whenever we go out and do a

633

00:26:19,170 --> 00:26:17,500

spacewalk where we're going to put a

634

00:26:21,660 --> 00:26:19,180

crew member on the arm we always have

635

00:26:24,480 --> 00:26:21,670

both work stations ready to go so in

636

00:26:27,360 --> 00:26:24,490

this case the discussion really was a

637

00:26:31,110 --> 00:26:27,370

trade space between it's going to take

638

00:26:33,540 --> 00:26:31,120

my robotics officer about 15 to 20

639

00:26:36,510 --> 00:26:33,550

minutes to reboot the workstation in the

640

00:26:38,790 --> 00:26:36,520

cupola the other option air is that she

641

00:26:40,320 --> 00:26:38,800

could bring up the robotics workstation

642

00:26:42,419 --> 00:26:40,330

in the lab with one

643

00:26:44,789 --> 00:26:42,429

command to take it from a backup state

644

00:26:46,380 --> 00:26:44,799

where we had it ready to go and make it

645

00:26:48,230 --> 00:26:46,390

an active workstation with a single

646

00:26:50,730 --> 00:26:48,240

command so that that would just take her

647

00:26:53,159 --> 00:26:50,740

however many seconds that is to send a

648

00:26:54,750 --> 00:26:53,169

command of the vehicle or take about 15

649

00:26:56,610 --> 00:26:54,760

to 20 minutes to bring up the cupola

650

00:26:59,630 --> 00:26:56,620

workstation the flip side of that

651  
00:27:01,889 --> 00:26:59,640  
equation is that the crew has a lot of

652  
00:27:03,990 --> 00:27:01,899  
ancillary equipment that they usually

653  
00:27:05,700 --> 00:27:04,000  
have scattered around the workstation to

654  
00:27:07,680 --> 00:27:05,710  
be doing robotics ops they've got all

655  
00:27:10,230 --> 00:27:07,690  
their books and they've got various

656  
00:27:13,440 --> 00:27:10,240  
space station support computers and

657  
00:27:16,259 --> 00:27:13,450  
they've got cameras and and notes and

658  
00:27:18,210 --> 00:27:16,269  
whatnot and calm configs so if they

659  
00:27:19,440 --> 00:27:18,220  
stayed at the cupola all that could stay

660  
00:27:21,570 --> 00:27:19,450  
with them and then it would take us

661  
00:27:24,509 --> 00:27:21,580  
about 15-20 minutes to reboot the stack

662  
00:27:26,070 --> 00:27:24,519  
or reboot the station or they could go

663  
00:27:27,450 --> 00:27:26,080

down to the lab work station where the

664

00:27:28,470 --> 00:27:27,460

work station would be ready to go but

665

00:27:30,810 --> 00:27:28,480

they'd have to transfer all that

666

00:27:33,539 --> 00:27:30,820

equipment so what they elected to do we

667

00:27:35,100 --> 00:27:33,549

can add Stan love my Capcom call up with

668

00:27:38,159 --> 00:27:35,110

that question they elected to just

669

00:27:41,009 --> 00:27:38,169

transfer down to the lab work station to

670

00:27:43,049 --> 00:27:41,019

finish the activities today because they

671

00:27:45,149 --> 00:27:43,059

didn't really get any advantage out the

672

00:27:46,560 --> 00:27:45,159

out the window views so they took all

673

00:27:49,409 --> 00:27:46,570

their equipment down to the lab work

674

00:27:51,240 --> 00:27:49,419

station and it was about 15 minutes 15

675

00:27:55,529 --> 00:27:51,250

20 minutes either way we either way we

676

00:27:58,289 --> 00:27:55,539

spaced it we made sure artan and Melanie

677

00:28:00,990 --> 00:27:58,299

and I were talking and off the off the

678

00:28:03,480 --> 00:28:01,000

loops there at the end of getting all

679

00:28:05,279 --> 00:28:03,490

that booted back up to see if steve

680

00:28:08,070 --> 00:28:05,289

bowen wanted us to go ahead and reclose

681

00:28:09,600 --> 00:28:08,080

the snares on the poha so we could take

682

00:28:11,610 --> 00:28:09,610

it away from him for a little while let

683

00:28:14,100 --> 00:28:11,620

him let him relax and he said he was

684

00:28:16,259 --> 00:28:14,110

fine he just wanted to press so from

685

00:28:18,450 --> 00:28:16,269

that point forward we continue to open

686

00:28:24,029 --> 00:28:18,460

the snares and took the arm put the pump

687

00:28:27,899 --> 00:28:24,039

module back work long I just a real

688

00:28:30,919 --> 00:28:27,909

quick follow-up you know in the cupola

689

00:28:34,310 --> 00:28:30,929

you have that great panoramic view

690

00:28:39,060 --> 00:28:34,320

around the outside of the station in

691

00:28:43,320 --> 00:28:39,070

destiny I believe you have to rely on TV

692

00:28:46,620 --> 00:28:43,330

views could you comment on the the

693

00:28:50,620 --> 00:28:46,630

additional challenge of doing the rest

694

00:28:53,410 --> 00:28:50,630

of the EBA out of the Destiny lab

695

00:28:59,740 --> 00:28:53,420

and I'm wondering how both of you feel

696

00:29:02,380 --> 00:28:59,750

about the Soyuz fly around whether you

697

00:29:06,190 --> 00:29:02,390

guys individually would be go for that

698

00:29:09,910 --> 00:29:06,200

fly around ok so let me see the first

699

00:29:12,310 --> 00:29:09,920

question I'll point out that the that

700

00:29:14,680 --> 00:29:12,320

the 20 a team then art happened to be

701  
00:29:16,150 --> 00:29:14,690  
the leader a VA officer on 20 if I

702  
00:29:18,460 --> 00:29:16,160  
remember correctly I worked I worked

703  
00:29:20,170 --> 00:29:18,470  
that mission has your over one flight

704  
00:29:23,440 --> 00:29:20,180  
director that's where we installed the

705  
00:29:27,070 --> 00:29:23,450  
coop was so we got all the way from to a

706  
00:29:28,960 --> 00:29:27,080  
way long time ago until 20 a without

707  
00:29:31,090 --> 00:29:28,970  
ever having those out the window view so

708  
00:29:33,250 --> 00:29:31,100  
we conducted a lot of EA's did a whole

709  
00:29:35,020 --> 00:29:33,260  
bunch of robotics activities without

710  
00:29:37,330 --> 00:29:35,030  
ever having the out to win the view so

711  
00:29:40,180 --> 00:29:37,340  
it's it's perfect perfectly feasible to

712  
00:29:42,940 --> 00:29:40,190  
go execute an EV a just using camera

713  
00:29:46,150 --> 00:29:42,950

views and and the crews have trained

714

00:29:48,910 --> 00:29:46,160

that way in the past and we trained on

715

00:29:51,100 --> 00:29:48,920

this mission in particular for this EV a

716

00:29:52,600 --> 00:29:51,110

the out the window views really don't

717

00:29:55,210 --> 00:29:52,610

give you a whole lot other than it's

718

00:29:56,620 --> 00:29:55,220

really nice for for mike and scott and

719

00:29:58,960 --> 00:29:56,630

when they were in their operating the

720

00:30:00,700 --> 00:29:58,970

RBI look the earth going by when when

721

00:30:02,650 --> 00:30:00,710

they were waiting for Steve to give them

722

00:30:04,720 --> 00:30:02,660

some additional commands but they really

723

00:30:06,070 --> 00:30:04,730

couldn't see they see the ops looking

724

00:30:07,750 --> 00:30:06,080

out the windows moving them down to the

725

00:30:12,760 --> 00:30:07,760

lab really didn't impact their ability

726

00:30:15,520 --> 00:30:12,770

to conduct this EV a at all question 2

727

00:30:19,060 --> 00:30:15,530

how do I feel about the Soyuz fly about

728

00:30:21,400 --> 00:30:19,070

you know an ops guy I'm ready to go

729

00:30:24,850 --> 00:30:21,410

execute whatever the program whatever

730

00:30:26,590 --> 00:30:24,860

the program decision is i think the the

731

00:30:29,140 --> 00:30:26,600

advantage of being able to go take those

732

00:30:31,690 --> 00:30:29,150

pictures would be would be really would

733

00:30:33,790 --> 00:30:31,700

be really good there would be some

734

00:30:35,830 --> 00:30:33,800

classic pictures that i'm sure would

735

00:30:38,800 --> 00:30:35,840

turn up all over the web and all over

736

00:30:40,300 --> 00:30:38,810

yalls first reporters in here front page

737

00:30:42,610 --> 00:30:40,310

the next day and they would be beautiful

738

00:30:44,890 --> 00:30:42,620

if we decide we're not going to go do

739

00:30:47,410 --> 00:30:44,900

that i'm ready to go execute the pmm

740

00:30:49,240 --> 00:30:47,420

outfitting day instead so i'm happy to

741

00:30:54,190 --> 00:30:49,250

go execute whatever the program app

742

00:30:55,750 --> 00:30:54,200

do as a DBA officer it doesn't really

743

00:30:58,300 --> 00:30:55,760

affect our system I think it would be

744

00:30:59,770 --> 00:30:58,310

great to see this fly around benim EBA

745

00:31:01,150 --> 00:30:59,780

would be go for it but there's a lot of

746

00:31:06,990 --> 00:31:01,160

other people that have a say in this

747

00:31:17,680 --> 00:31:13,930

okay I say that Todd yeah Kelly that's

748

00:31:19,210 --> 00:31:17,690

it thanks okay and back here at JSC I've

749

00:31:24,160 --> 00:31:19,220

got a couple questions Denise you want

750

00:31:26,800 --> 00:31:24,170

to start out Denise Chow it's based com

751  
00:31:28,150 --> 00:31:26,810  
a question for art with stevo and having

752  
00:31:29,890 --> 00:31:28,160  
only about a month to prepare for the

753  
00:31:31,450 --> 00:31:29,900  
EBA just wonder if you can comment on

754  
00:31:32,710 --> 00:31:31,460  
how challenging it is for an astronaut

755  
00:31:34,960 --> 00:31:32,720  
to jump into something like that and

756  
00:31:37,570 --> 00:31:34,970  
pick up choreography for two of the VA's

757  
00:31:39,070 --> 00:31:37,580  
in a relatively short time yeah and we

758  
00:31:41,020 --> 00:31:39,080  
typically have about 10 months of

759  
00:31:42,520 --> 00:31:41,030  
training to get ready and usually the

760  
00:31:44,890 --> 00:31:42,530  
crew members its assigned to this flight

761  
00:31:47,200 --> 00:31:44,900  
will help develop the task all along the

762  
00:31:49,660 --> 00:31:47,210  
way and get things the way that he likes

763  
00:31:51,850 --> 00:31:49,670

them in this case Tim helped develop

764

00:31:54,310 --> 00:31:51,860

those those EVs all along the way we

765

00:31:57,310 --> 00:31:54,320

were ready to go and when steve coming

766

00:31:59,680 --> 00:31:57,320

in late he really had to rely on Tim and

767

00:32:02,770 --> 00:31:59,690

his expertise to really explain how he

768

00:32:06,070 --> 00:32:02,780

performed each task specifically so i

769

00:32:08,080 --> 00:32:06,080

think because steve just flew on 132 and

770

00:32:10,060 --> 00:32:08,090

he has a lot of experience CBA's very

771

00:32:12,160 --> 00:32:10,070

talented EV a crew member and because of

772

00:32:13,750 --> 00:32:12,170

tim's hard work that he's put in that

773

00:32:21,760 --> 00:32:13,760

combination allowed this to be a success

774

00:32:23,440 --> 00:32:21,770

today anything else in the back

775

00:32:25,030 --> 00:32:23,450

actually since you're going that way

776

00:32:27,610 --> 00:32:25,040

lunch go ahead and that's marking I'm

777

00:32:29,470 --> 00:32:27,620

going home hey thanks mark row for

778

00:32:34,120 --> 00:32:29,480

aviation week I think I got a quick

779

00:32:36,760 --> 00:32:34,130

question had to do with the pmm ops and

780

00:32:39,940 --> 00:32:36,770

I'm just seeking some clarification said

781

00:32:41,380 --> 00:32:39,950

moving material from there to the HTV

782

00:32:44,740 --> 00:32:41,390

and I wondered if you were talking about

783

00:32:46,810 --> 00:32:44,750

like packing material or trash or

784

00:32:50,050 --> 00:32:46,820

something you'd really just not want to

785

00:32:51,400 --> 00:32:50,060

take up volume on the station yeah great

786

00:32:56,170 --> 00:32:51,410

question and we're not getting that's

787

00:32:58,720 --> 00:32:56,180

all of the all of the packing there's a

788

00:33:03,430 --> 00:32:58,730

launch restraint equipment there's foam

789

00:33:06,730 --> 00:33:03,440

there's there was a video running around

790

00:33:09,040 --> 00:33:06,740

out there that that involved what all

791

00:33:10,510 --> 00:33:09,050

packing went around Robonaut for example

792

00:33:12,670 --> 00:33:10,520

and that's a considerable amount of

793

00:33:16,030 --> 00:33:12,680

stuff that we don't actually that we

794

00:33:19,390 --> 00:33:16,040

absolutely need to protect that very

795

00:33:21,970 --> 00:33:19,400

sensitive electronics and hardware for

796

00:33:25,060 --> 00:33:21,980

the the forces that we see coming off

797

00:33:27,700 --> 00:33:25,070

the pad but once we get it in orbit all

798

00:33:30,760 --> 00:33:27,710

that stuff is really just in the way so

799

00:33:32,170 --> 00:33:30,770

so once we get Robonaut out eventuate

800

00:33:34,810 --> 00:33:32,180

and we're not going to impact Robonaut

801  
00:33:36,430 --> 00:33:34,820  
and just using that as an example but so

802  
00:33:38,440 --> 00:33:36,440  
there's a lot of launch equipment and

803  
00:33:40,540 --> 00:33:38,450  
foam and various other pieces of

804  
00:33:43,120 --> 00:33:40,550  
hardware in the pmm that were just there

805  
00:33:45,280 --> 00:33:43,130  
in order to be able to take the pmm

806  
00:33:47,080 --> 00:33:45,290  
uphill that we no longer need so we can

807  
00:33:49,450 --> 00:33:47,090  
get some of that out and start

808  
00:33:52,120 --> 00:33:49,460  
transferring over the HTV so all the

809  
00:33:53,260 --> 00:33:52,130  
packaging that that came up with a

810  
00:33:58,370 --> 00:33:53,270  
vehicle that's what I'm talking about

811  
00:34:04,410 --> 00:34:01,170  
Philips lost with NASA Space Flight calm

812  
00:34:06,950 --> 00:34:04,420  
I think for art to follow on Denise's

813  
00:34:09,900 --> 00:34:06,960

question a little bit can you talk about

814

00:34:13,050 --> 00:34:09,910

the advantage to your team today to have

815

00:34:14,820 --> 00:34:13,060

Tim in the control center to help to

816

00:34:17,010 --> 00:34:14,830

help go through the you know a couple of

817

00:34:18,960 --> 00:34:17,020

hiccups that you had during the EBA I

818

00:34:20,550 --> 00:34:18,970

think it was a huge advantage to have

819

00:34:23,910 --> 00:34:20,560

Tim we kind of talked about this earlier

820

00:34:25,890 --> 00:34:23,920

as a team that Tim's kind of the alter

821

00:34:27,300 --> 00:34:25,900

ego of Steve in some ways that he has a

822

00:34:28,950 --> 00:34:27,310

lot of the pieces that we've seen in

823

00:34:31,980 --> 00:34:28,960

training that Steve didn't have time to

824

00:34:34,560 --> 00:34:31,990

see and so when we ran into a few off

825

00:34:35,850 --> 00:34:34,570

nominal situations Tim had seen this

826

00:34:37,260 --> 00:34:35,860

type of thing in the pool and just had a

827

00:34:39,090 --> 00:34:37,270

little more experience and he was able

828

00:34:40,740 --> 00:34:39,100

to help Steve along with everything so

829

00:34:42,750 --> 00:34:40,750

yeah I think it's a huge help to have

830

00:34:46,790 --> 00:34:42,760

Tim and in this situation it was the

831

00:34:49,710 --> 00:34:46,800

perfect way to handle it Thanks and I

832

00:34:52,470 --> 00:34:49,720

throw on there also that the tim kopra

833

00:34:55,740 --> 00:34:52,480

is just an outstanding guy he really is

834

00:34:58,320 --> 00:34:55,750

I liked him a lot he's he's worked

835

00:35:00,180 --> 00:34:58,330

really hard to make sure that Steve bow

836

00:35:01,620 --> 00:35:00,190

and ready to go execute these e VA I

837

00:35:05,270 --> 00:35:01,630

can't say enough good things about Tim

838

00:35:12,060 --> 00:35:10,110

ok any further questions ok well that

839

00:35:15,060 --> 00:35:12,070

sounds like we're about radius in this

840

00:35:17,640 --> 00:35:15,070

briefing just a couple of programming

841

00:35:20,460 --> 00:35:17,650

notes for you coming up overnight on

842

00:35:23,520 --> 00:35:20,470

NASA TV at eight o'clock central time

843

00:35:25,290 --> 00:35:23,530

we'll have today's video file and then

844

00:35:27,360 --> 00:35:25,300

coming out after that at nine p.m.

845

00:35:28,950 --> 00:35:27,370

central time we'll have the day's flight

846

00:35:31,560 --> 00:35:28,960

day highlights package with all the best

847

00:35:33,690 --> 00:35:31,570

video of a day's spacewalk and then

848

00:35:36,840 --> 00:35:33,700

remember that 240 a.m. central time on

849

00:35:38,880 --> 00:35:36,850

tuesday will have the ISS flight vector

850

00:35:40,560 --> 00:35:38,890

update and then of course the combined

851

00:35:44,130 --> 00:35:40,570

crew on the station is scheduled to wake